Matt Nichols

Software Engineering • Prototyping • Interactive Multimedia Design

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Jul '17 - Present

Meta Creative Coder

- Hybrid design/eng role on the Sound Design team, progressing from IC4 to IC6 (staff).
- Designing, building, and shipping augmented reality experiences in Spark AR, with a focus on sonic interactivity: processing mic input, generating audio & musical output.
- Internal prototyping to explore new design patterns for interactive multimedia, and to discern development opportunities for Meta's AR infrastructure & creative tooling (technologies used include: Spark AR, Max/MSP, Svelte, P5.js, Web Audio, MediaPipe).
- Communicating my team's design needs with partner engineering teams, and guiding roadmapping & design for new audio tooling & capabilities.
- Building out prototyping processes within Sound Design, facilitating brainstorming sessions, and mentoring my design colleagues in technical work.
- Speaking about my Spark AR audio work at an AES Conference, GameSoundCon, and a two-day hackathon that I helped to organize & run at Abbey Road Studios.

Aug '16 - Jul '17

Facebook Software Engineer

- Built infrastructure for photo & video filters in a native iOS runtime, and in a cross-platform AR engine (Objective-C, C++). This technology utilized OpenGL fragment shaders to process pixel transformations on incoming video frames.
- Designed and implemented visual effects that leveraged this system (GLSL).
- Built basic tooling for audio effect support in a MacOS AR creation tool (Swift).
- Worked on the in-app Facebook camera, focusing on performance & UX (Objective-C).

Oct '15 - Jul '16

Eyegroove Software Engineer

- Built a video creation tool & social network as one of three iOS engineers (Swift).
- Created a fully-featured direct messaging prototype, built a framework for selling premium video filters using StoreKit, improved our stability and performance, and created several video filters for the app.
- Configured our JIRA instance, instituted an agile 2-week sprint cycle, and implemented code review standards for our iOS team.

Jul '13 - Oct '15

Twitter Software Engineer

- Focused on onboarding experiences as an iOS engineer on the Growth team.
- Developed app-wide phone number integration for network-building and account security, built a framework for alerts and user education, and rewrote our sign-in and user onboarding flows from the ground up (Objective-C).
- Designed a data pipeline to track mobile permissions settings (Hadoop, Tableau, Scalding), and a service for localized, hierarchical interest topics (Scala).

2009 - 2013

Brown University B.S. Computer Science

- Bachelor of Science in Computer Science, with an additional focus in Creative Writing.
- Undergraduate TA for CS15: Intro to Object-Oriented Programming, and CS16: Intro to Algorithms & Data Structures. Head TA for CS168: Computer Networks.
- Summer internships at Microsoft (PM; 2011) and Twitter (Engineering; 2012).
- Overall GPA: 3.83

mattnichols206@gmail.com • man1.biz • flatpickles.com